NESTERENKO, V.V., inzh.; KANDYBA, M.I., dots.

Use of the shield system in ore mining. Izv.vys.ucheb.zav.; gor.zhur. no.3:26-34 '59. (MIRA 13:4)

1. Krivorozhskiy gornorudnyy institut. Rekomendovana kafedroy razrabotki mestorozhdeniy poleznykh iskopayemykh.
(Mining engineering)

MESTERENKO, V.V., gornyy inzhener; KRAVCHENKO, Ya.V., gornyy inzhener.

The use of metal timbering in the Ingulets mine. Gor.zhur. no.1:39-42 Ja '55. (Ingulets--Mine timbering) (MLRA 8:7)

NESTERENKO, V.V., gornyy inzh.

Ways of increasing labor productivity and reducing the cost of sublevel caving. Gor. zhur. no.8:8-13 Ag '64.
(MIRA 17:10)

1. Trest Dzerzhinskruda, Krivoy Rog.

1. ATONENKO, N. V.; NESTERENKO, V. V.; PLEMYASHOV, A.S. Engs.

2. USSR (600)

4. Mining Engineers

7. Block-caving system at the Ingulets mine. Gor. zhur no. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January, 1953. Unclassified.

NESTERENKO, V. T., Cand Agric Sci (diss) -- "The cultivation of potatoes by the method of summer planting under the arid conditions of Stavropol' Kray". Stavropol', 1959. 15 pp (Min Agric RSFSR, Stavropol' Agric Inst), 130 copies (KL, No 11, 1960, 130)

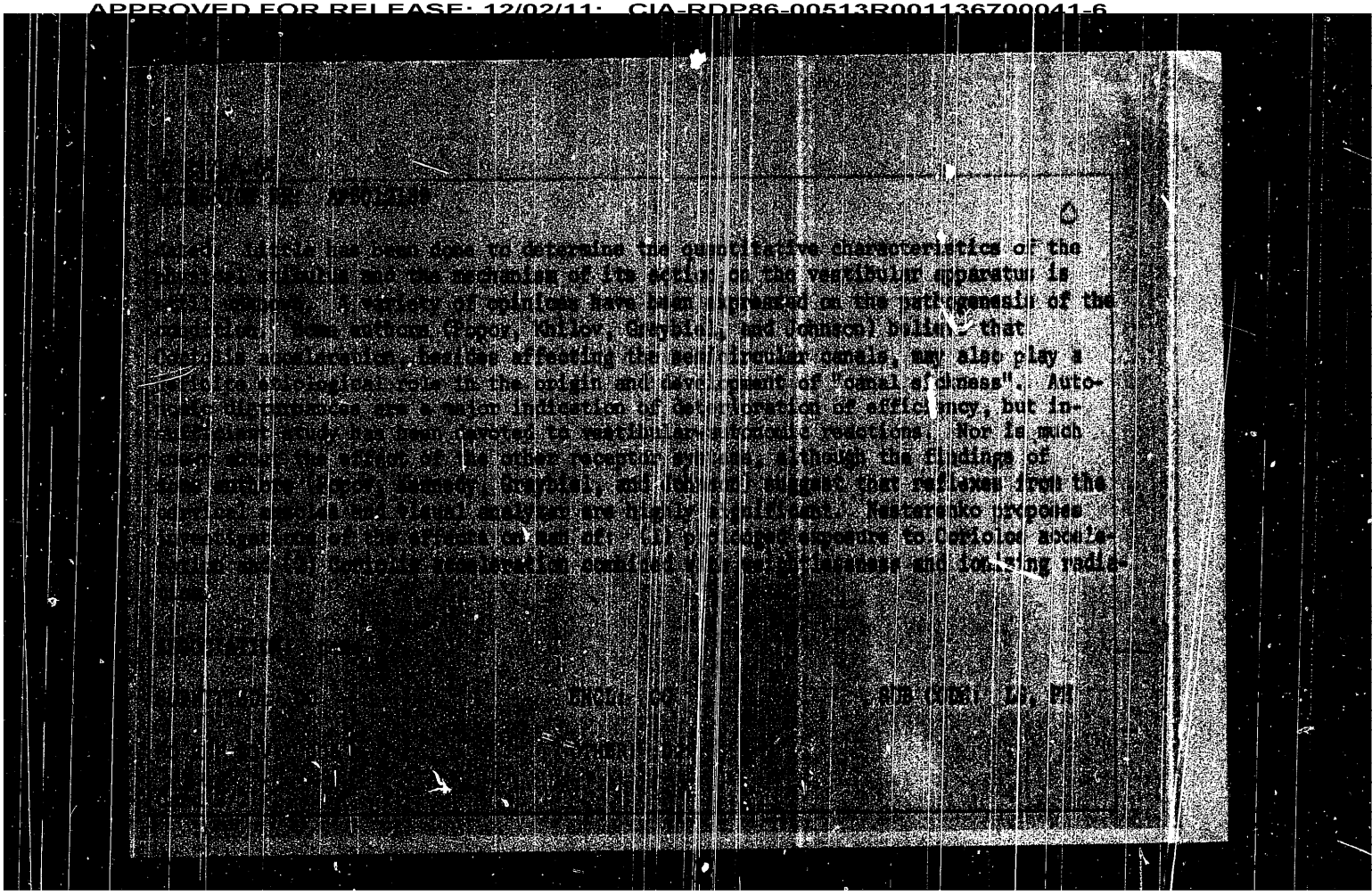
1. NESTERENKO, V. T.

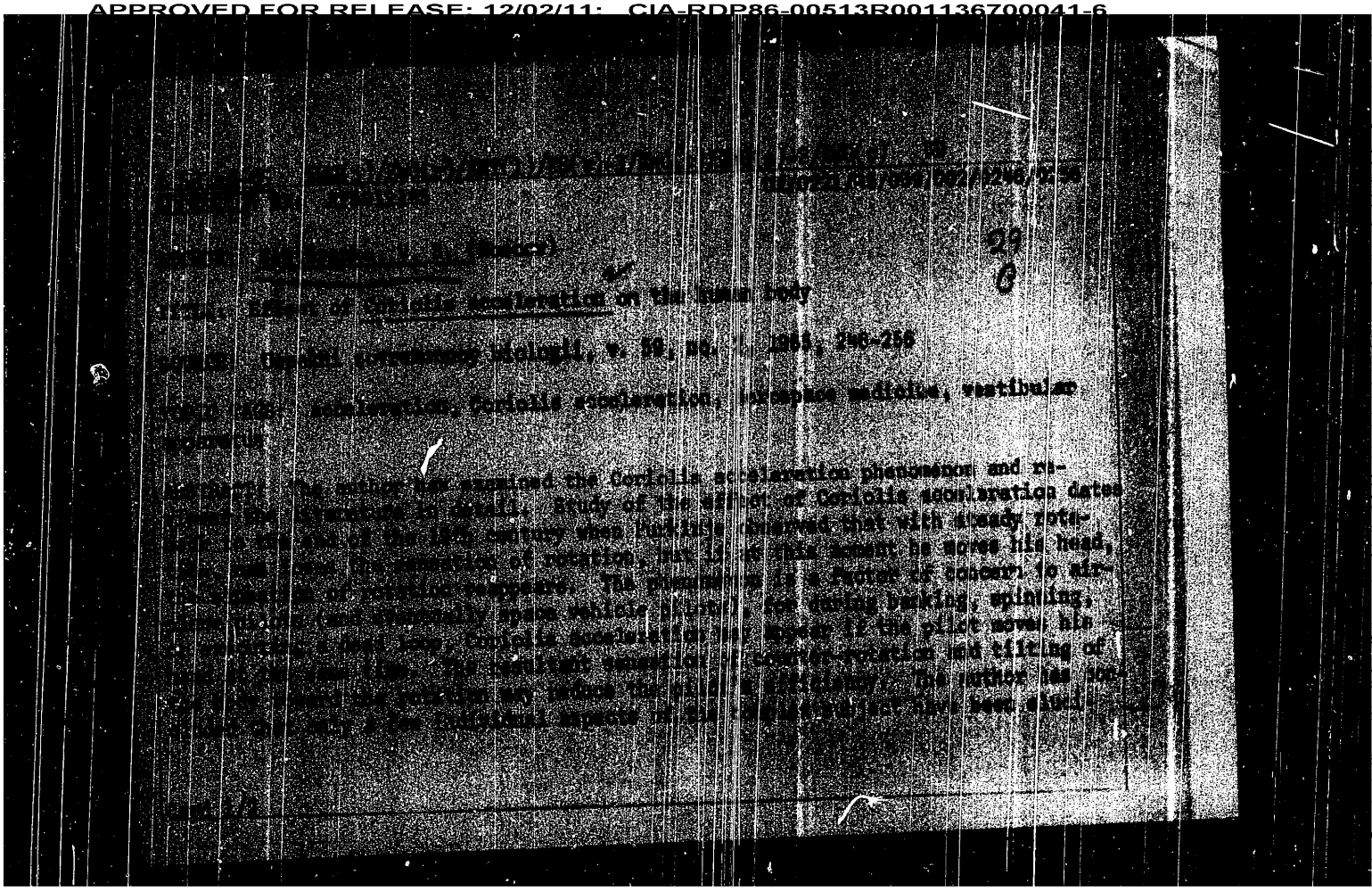
2. USSR (600)

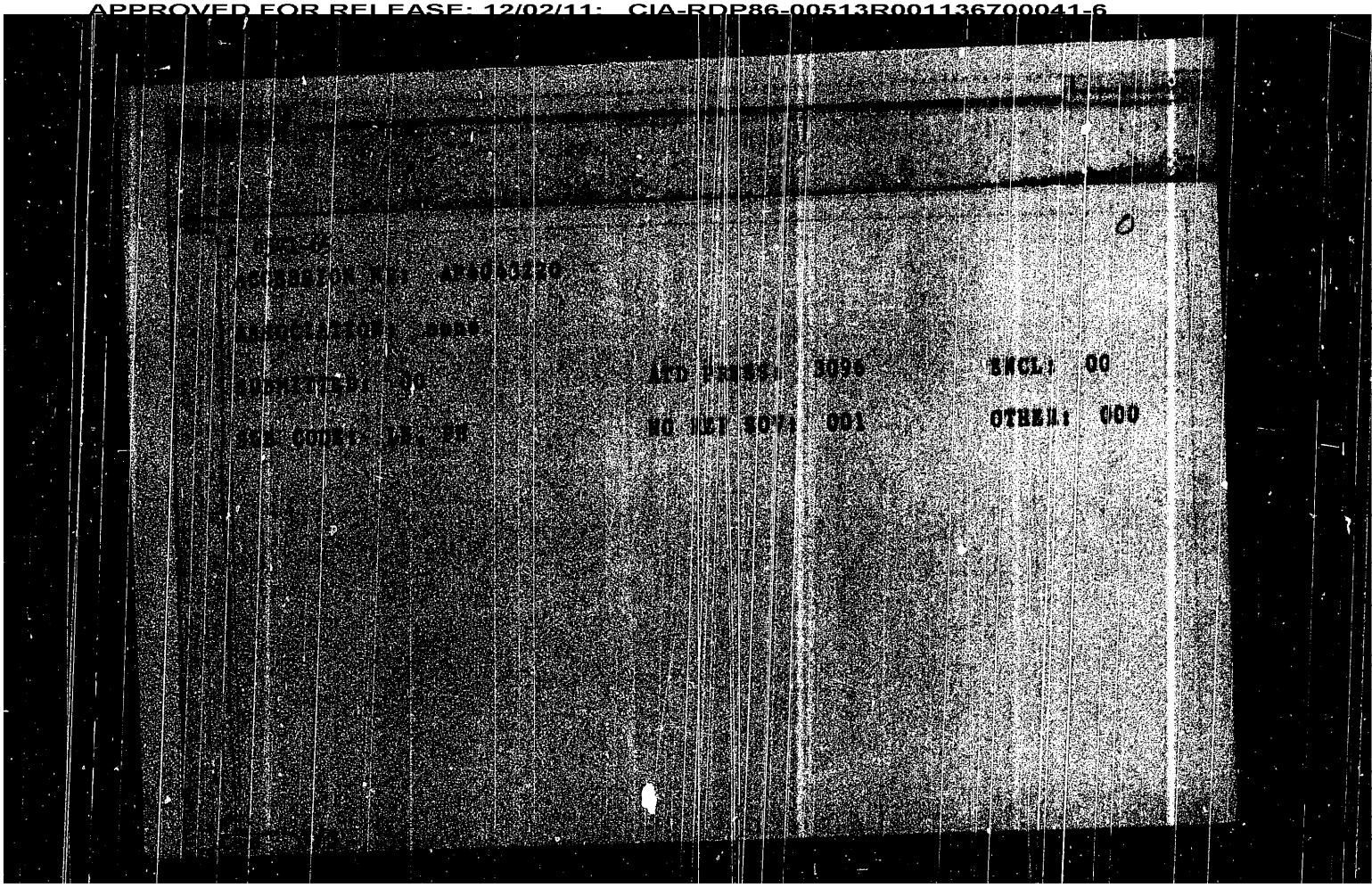
4. Potatoes

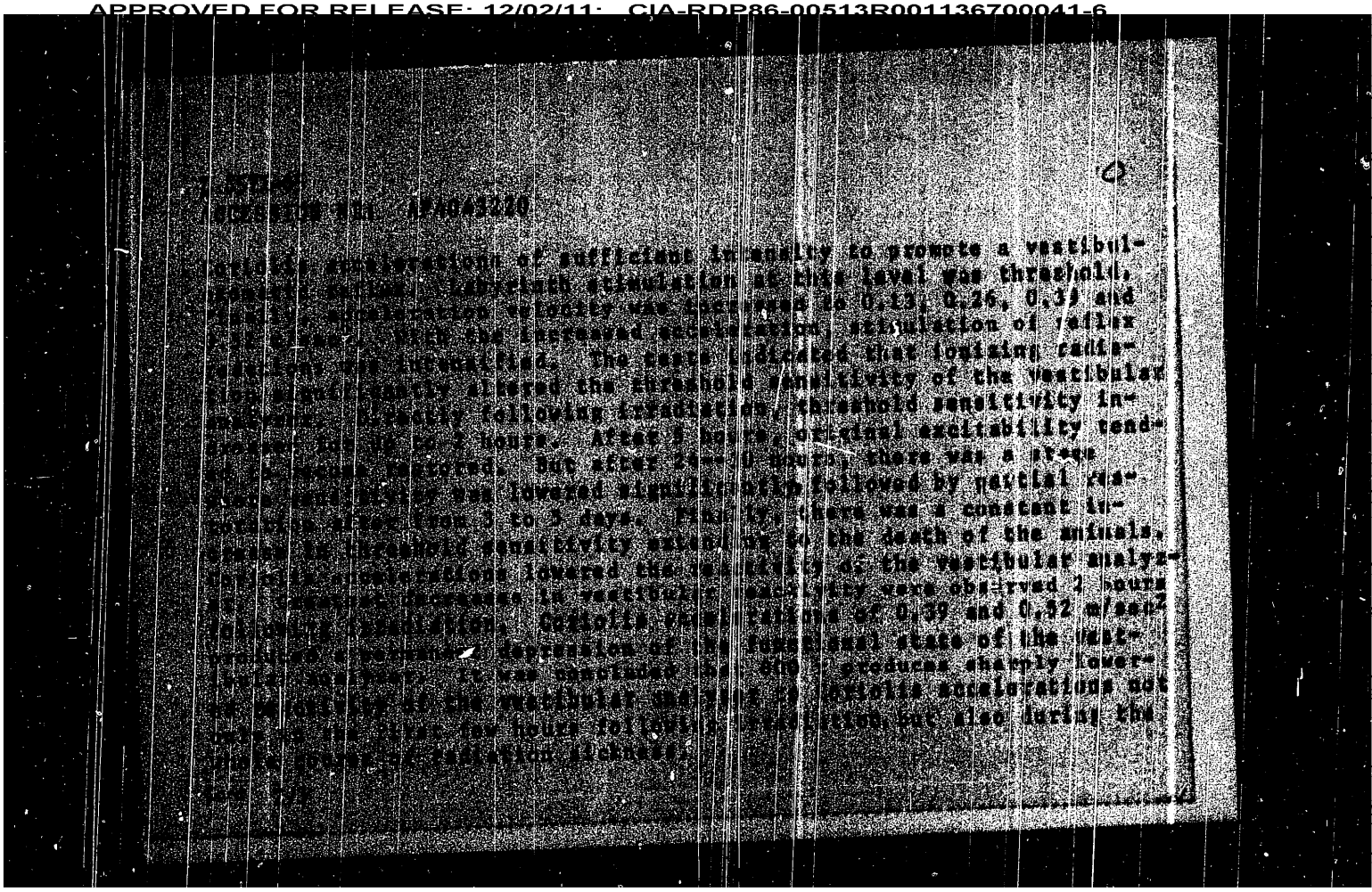
7. Keeping seed potatoes for summer planting. Sad i og. no.9, 1952

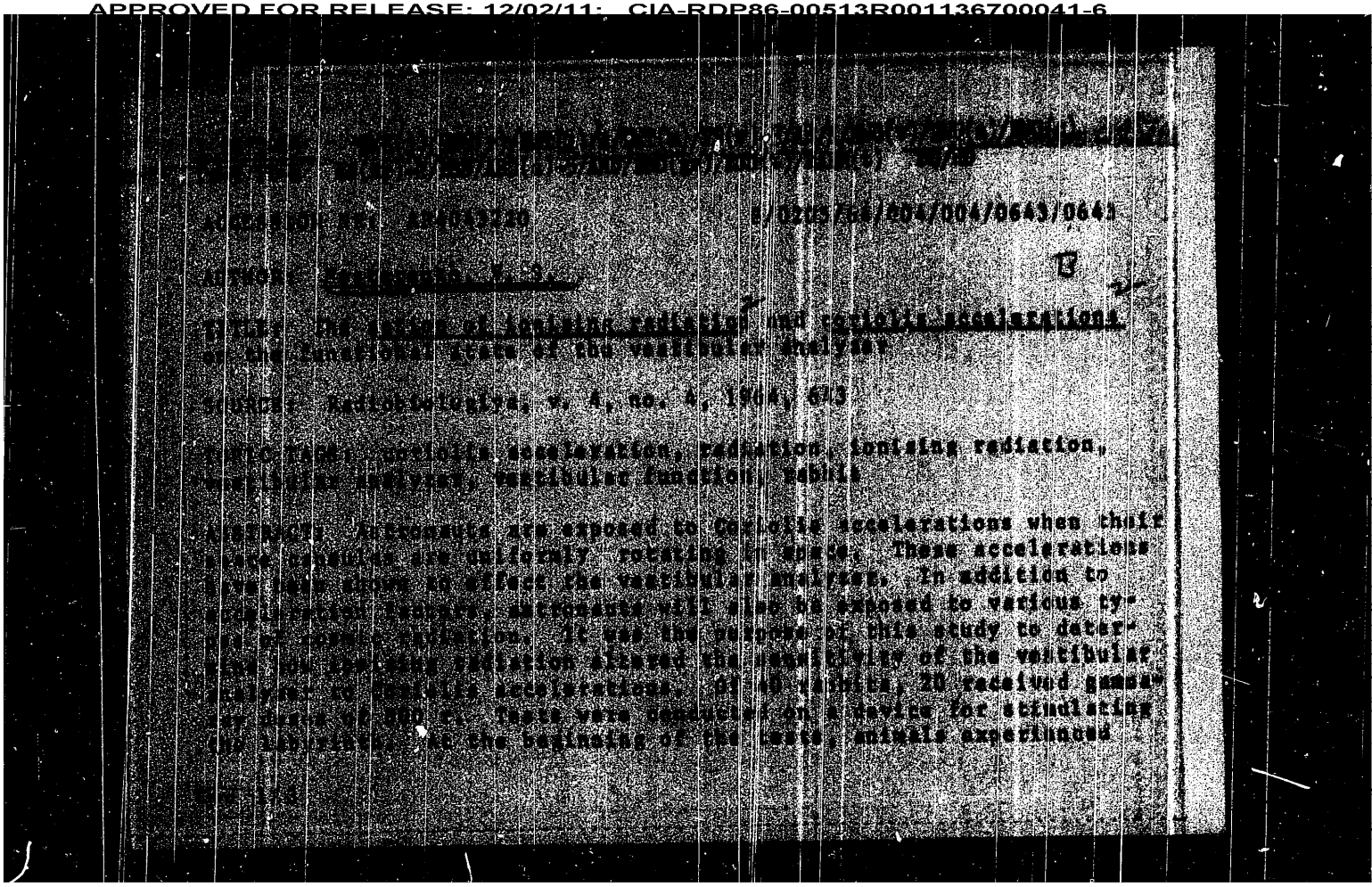
9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.











SEDOV, V.V.; PETROVA, M.S.; NIKSTERENKO, V.S.; MANDEL'TSVAYG, Yu.B.

Experimental study of kidney function using cardiotrast (I^{131}). Med. rad. 8 no.4:42-47 Ap'63 (MIRA 17:2)

NESTERENKO, V.K.

USSR/Chemistry - Quantitative analysis

Card 1/1 Pub. 43 - 63/97

Authors : Nesterenko, V. K.; Rossikhin, V. S.; and Tsikora, I. L.

Title : Spectral analysis of small Cu, Pb, Bi and Fe admixtures in Sn

Periodical : Izv. AN SSSR. Ser. fiz. 18/2, 281-282, Mar-Apr 1954

Abstract : A method was developed for quantitative analysis of Sn for its content of Cu, Pb, Bi and Fe according to GOST (State Standard) 860-41. Table.

Institution : State University, Dnepropetrovsk

Submitted : .....

ACC NR: AP6036947 SOURCE CODE: UR/0233/66/000/003/0068/0070

AUTHORS: Ismailzade, I. G.; Azizov, T. S.; Nesterenko, V. I.; Shamilzade, Z. M.

ORG: none

TITLE: Investigation of the influence of accelerated electrons on the structure of polycrystalline barium titanate

SOURCE: AN AzerbSSR. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk, no. 3, 1966, 68-70

TOPIC TAGS: irradiation effect, electron beam, polycrystal, diffractometer, barium titanate/ URS-50 IM diffractometer

ABSTRACT: The effect of accelerated electrons on the structure of barium titanate was investigated. A linear electron accelerator was used as the electron source with a pulse rate of 400 sec^{-1} and a beam width of 10 mm. The specimens were 3 mm thick, 10 mm in diameter disks of $BaTiO_3$ annealed at 900C for two hours. The structure was analyzed by means of an URS-50 IM x-ray diffractometer. The analysis consisted of determining the position and intensity of the maxima for 002 and 200. The results show that the magnitude of spontaneous deformation of the lattice c/a increases. After irradiation, the disk was reheated for 20 minutes at 350C. This caused a reduction in the elementary cells of the specimen. Orig. art. has: 1 figure and 1 table.

Card 1/1 SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 006

SUPRUNOV, N.N.; BESPAL'CHIK, L.M.; TIMOFEYEV, V.M.; BEZLYUD'KO, A.I., otv. red.; YEROKHIN, G.M., ved. red.; NESTERENKO, V.I., red.; KUNIN, I.K., red.;

[Jet boring; studies] Termicheskoe burenie; sbornik trudov. Moskva, Nedra, 1965. 182 p. (MIRA 18:12)

1. Krivoy Rog. Institut "Giprorudmash."

ACCESSION NR: AP4039401

maximum of 321_{α} decreases more markedly than that of 200_{α}. Results show that the nonlinear properties of VK-3 in steady electrical fields on the order of 3.8-6.6 kg/cm are associated not with changes in symmetry of the lattice but probably with deformation of the electron clouds of the ions, which leads to a diminution in the intensity of individual maxima. Orig. art. has: 2 figures.

ASSOCIATION: Institut neftekhimicheskikh protsessov im. Yu. G. Mamedaliyeva, AN AzerbSSR (Institute of Petroleum-Chemical Processes AN AzerbSSR)

SUBMITTED: 11Aug62 ENCL: 00

SUB CODE: SS, MT, OP NO REF SOV: 003 OTHER: 002

Card 2/2

ACCESSION NR: AP4039401 S/0070/64/009/003/0412/0413

AUTHORS: Ismailzade, I. G.; Verbitskaya, T. N.; Nesterenko, V. I.

TITLE: Preliminary data on the x-ray investigation of VK-3 ferroelectric ceramic in steady electrical fields

SOURCE: Kristallografiya, v. 9, no. 3, 1964, 412-413

TOPIC TAGS: x ray diffraction, VK 3 ferroelectric ceramic, electric field

ABSTRACT: The results of a study on the effect of a steady electrical field on the diffraction pattern of VK-3 are presented. At room temperature the material is cubic, like perovskite ($a = 4.006 \pm 0.002$ Å), with a Curie point of about 20C. Its properties are markedly nonlinear in a steady electrical field. Each maximum was measured in sequence: first in the electrical field, next with the field removed, then with the field restored, and lastly with the field again removed. No displacement of diffraction maxima was observed, which agrees with the work of Yu. N. Venevtsev, A. G. Kapy*shev, G. S. Zhdanov, and T. N. Verbitskaya (Tezisy* dokladov tret'yego soveshchaniya po segnetoelektrichestvu, 1960, p. 14). However, the intensity of the maxima was observed to diminish sharply in the steady electrical field. This fact was not noted in the work cited. At any particular voltage the

Card 1/2

GOVZMAN, G.M.; NESTERENKO, V.G.

Mechanization of the manufacture of the "Ukraina" piano.
Bum.i der.prom. no.1:39-45 Ja-Mr '62. (MIRA 15:5)

1. Chernigovskaya muzykal'no-mebel'naya fabrika.
(Chernigov--Piano makers) (Assembly-line methods)

LYUBARSKIY, I.M.; LYUBCHENKO, A.P.; NESTERENKO, V.G.

Performance of sulfured lubricants. Tren. i izn. mash. no. 12:295-303 '58. (MIRA 11:8)

(Lubrication and lubricants)
(Sulfur)

AVAILABLE: Library of Congress

Card 20/20

TM/bg
7-10-59

TABLE OF CONTENTS:

PURPOSE: This book is intended for specialists in the field of machine and instrument manufacture who use radioactive isotopes in the study of materials and processes.

COVERAGE: This collection of papers covers a very wide field of the utilization of tracer methods in industrial research and control techniques. The topic of this volume is the use of radioisotopes in the machine- and instrument-manufacturing industry. The individual papers discuss the applications of radioisotope techniques in the study of metals and alloys, problems of friction and lubrication, metal cutting, engine performance, and defects in metals. Several papers are devoted to the use of radioisotopes in the automation of industrial processes, recording and measuring devices, quality control, flowmeters, level gauges, safety devices, radiation counters, etc. These papers represent contributions of various Soviet institutes and laboratories. They were published as Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science, April 4-12, 1957. No personalities are mentioned. References are given at the end of most of the papers.

21(8)

PHASE I BOOK EXPLOITATION

Vsesoyuznaya nauchno-tekmicheskaya konferentsiya po primeneniy[illegible]
dioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom kho[illegible]
aystve i nauke Moscow, 1957.

Trudy... Mashinostroyeniye i priborostroyeniye (Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science; Machine and Instrument Manufacturing) Moscow, Izd-vo AN SSSR, 1958. 358 p.
4,500 copies printed.

Sponsoring Agencies: USSR. Glavnoye upravleniye po ispol'zovaniyu atomnoy energii, and Akademiya nauk SSSR.

Editorial Board of Set: V.I. Dikushin, Academicain (Resp. Ed.), N.N. Shumilovskiy (Deputy Resp. Ed.), Yu. S. Zaslavskiy (Deputy Resp. Ed.), L.K. Tatochenko, B.I. Verkhovskiy, S.T. Nazarov, L.I. Petrenko, and N.G. Zelevinskaya (Secretary).

Ed. of Publishing House: P.N. Belyanin; Tech. Ed.: T.P. Polenova.

Card 1/ 20

ACCESSION NR: AP3009529

ASSOCIATION: none

SUBMITTED: 12Sep62 DATE ACQ: 08Nov63 ENCL: 00

SUB CODE: PH, IE NO REF SOV: 000 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 12/02/11: CIA-RDP86-00513R001136700041-6

USSR

ACCESSION NR: AP3009529 S/0286/63/000/015/0043/0043

AUTHOR: Nesterenko, V. G.; Lyubchenko, A. P.

TITLE: Method for determination of temperature fields on surfaces inaccessible during operation. Class 21, No. 156252

SOURCE: Byul. izobret. i tovarn. znakov, no. 15, 1963, 43

TOPIC TAGS: temperature field, surface temperature field, radiation temperature measurement

ABSTRACT: This Author Certificate introduces a method for the determination of temperature on surfaces inaccessible during operations. To measure the temperature of an object without interruption and to reduce measurement errors, the surface of the investigated object is covered by a layer of a radioactive element, such as Co^{60}, with the subsequent deposition of a nonradioactive protective metallic layer. The temperature is determined by β- and γ-radiation intensities before and after annealing.

Card 1/2

VYGODSKIY, A.I.; NESTERENKO, V.G.; SHERMAN, D.G.

Mass spectrometric determination of hydrogen in metals. Zav.lab. 29 no.12:1474-1475 '63. (MIRA 17:1)

1. Zavod transportnogo mashinostroyeniya.

NESTERENKO, V.G.

Seed germination in perennial flowering plants. Izv. AN Mold. SSR, no.10:54-59 '63. (MIRA 16:5)

NESTERENKO, V.G.

Biology of Virginia mallow (Sida hermaphrodita Rusby-Cum). Izv. Mold. fil. AN SSSR no.1:13-22 '61. (MIRA 16:3)
(Moldavia--Mallow)

NESTERENKO, V.G.

Germination of seeds stored under laboratory conditions. Biul.Glav. bot.sada no.36:99-103 '60. (MIRA 13:7)

1. Botanicheskiy sad Moldavskogo filiala Akademii nauk SSSR, Kishinev.
(Germination)

NEVESENKO, Z. I., NESTERENKO, V. G.

Plants, Ornamental - Ukraine

Work of the Dnepropetrovak Botanical Garden on ornamental plants, Biul. Glav.bot.sada, No. 9, 1951.

Monthly List of Russian Accessions, Library of Congress, June 1952 Unclassified.

ACCESSION NR: AT4045008

the instrument is based on the serial microroentgenometer "Kaktus", whose two-tube bridge circuit is highly sensitive and sufficiently stable. In order that the instrument register only the voltage corresponding to radiation reflected from the coating, the circuit contains a predetermined compensation for the constant component of the ionization voltage. A circuit diagram of the instrument is presented and calibration curves for determining the thicknesses of various coatings on various bases are given. The usual measurement time is 30-40 seconds, and the instrument can measure thicknesses down to 20 μ with an accuracy of 3-5%. Orig. art. has: 2 figures, and 1 formula.

ASSOCIATION: none

SUBMITTED: 07Jan64 ENCL: 00 SUB CODE: IE, MM

NO REF SOV: 000 OTHER: 000

Card 2/2

ACCESSION NR: AT4045008 S/0000/64/000/000/0037/0039

AUTHOR: Bakakin, G. N.; Vy*godskiy, A. I.; Nesterenko, V. G.

TITLE: The ITP-L14 plating thickness meter

SOURCE: Soveshchaniye po probleme Izpol'zovaniye atomnoy energii. Kiev, 1961. Radiatsionnaya avtomatika, izotopy* i yaderny*ye izlucheniya v nauke i tekhnike (Radiation automation control systems, isotopes, and nuclear radiation in science and technology); doklady* soveshchaniya. Kiev, Izd-vo AN UkrSSR, 1964, 37-39

TOPIC TAGS: thickness measurement, plating thickness, clad metal, clad steel, metal coating, radioactive measurement / ITP-L14 meter

ABSTRACT: The ITP-L14 plating thickness meter, which operates on the principle of backward scattering of beta-radiation, is manufactured at the Khar'kovskiy zavod im. V. A. Maly*sheva (V. A. Maly*shev Factory in Khar'kov). The author points out that methods of thickness measurement by the use of radioactive isotopes have many advantages over other methods, and lists several of these advantages. The new instrument uses the radioactive isotope Tl^{204} as the source of beta radiation. The energy of the beta rays is 0.77 Mev and the radioactivity of the annular source is 15 millicuries. This rather high source radioactivity was chosen to make it possible to measure the thickness of nickel-phosphorus platings on steel. The design of

Card 1/2

ACC NR: AP7002884

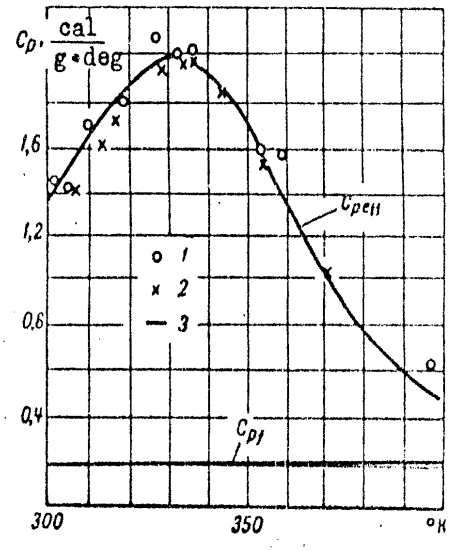
was determined experimentally; it did not exceed 15% of the amount of the heat entering the calorimeter. The experimental heat capacity values are given in the figure together with the experimental heat capacity values of McCallum and with the heat capacity values calculated by the method of L. V. Mishina and V. B. Nesterenko (Vestsi AN BSSR, Ser. fiz.-tekhn. navuk, no. 2, 1965). The results of the study indicated that the method of the IYaE AN BSSR makes it possible to determine the effective heat capacity of N_2O_4 with an accuracy within 2.6%. Orig. art. has: 2 figures. [W. A. 77] [BO]

SUB CODE: 07,20 / SUBM DATE: 30Jun66/ ORIG REF: 003/ OTH REF: 002

Card 2/3

ACC NR: AP7002884

where Q is the amount of heat entering the calorimeter, G is the gaseous N_2O_4 flow rate in the calorimeter, Δt is the gas temperature rise in the calorimeter, and q is the total heat loss in the calorimeter. This loss



Calculated and experimental values of the heat capacity at constant pressure of N_2O_4 in equilibrium dissociation at 1 atm

1 - Data of the NYaE AN BSSR; 2 - data of McCallum; 3 - data calculated by the method of Mishina and Nesterenko.

Card 2/3

ACC NR: AP7002884 (A) SOURCE CODE: UR/0201/66/000/004/0123/0125

AUTHOR: Nesterenko, V. B.; Timofeyev, B. D.; Il'yukhin, Yu. D.

ORG: Institute of Nuclear Power Engineering, AN BSSR (Institut yadernoy energetiki AN BSSR)

TITLE: Experimental study of the heat capacity of nitrogen tetroxide in equilibrium dissociation

SOURCE: AN BSSR. Vestsi. Seryya fizika-tekhnichnykh navuk, no. 4, 1966, 123-125

TOPIC TAGS: nitrogen tetroxide, heat capacity

ABSTRACT: The effective heat capacity of N_2O_4 dissociating at 1 atm and 300—400K has been determined experimentally. The experiments were carried out in a continuous-flow calorimeter, equipped with an isothermal jacket, designed at the Institute of Nuclear Power Engineering, Academy of Sciences BSSR (IYaE AN BSSR). The apparatus and the procedure are described in the source. The effective heat capacity at constant pressure was calculated from the formula

$$c_{p\,\text{eff}} = \frac{Q - q}{G\Delta t},$$

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ACC NR: AP7002877

of variation of the independent variable (as is the case for gases with constant specific heat) but also inside the interval. The conditions under which maxima occur inside the interval are determined for both the uniflow and counterflow cases. The calculations demonstrate that allowance for the variable specific heat alters the heat-balance calculations significantly. Orig. art. has: 1 figure and 18 formulas.

SUB CODE: 20, 13/ SUBM DATE: 23Jun66/ ORIG REF: 004

Card 2/2

ACC NR: AP7002877 (A,N) SOURCE CODE: UR/0201/66/000/004/0023/0026

AUTHOR: Bazhin, M. A.; Bubnov, V. P.; Nesterenko, V. B.

ORG: Institute of Nuclear Power Engineering, AN BSSR (Institut yadernoy energetiki AN BSSR)

TITLE: Calculation of regeneration in cycles using working media with variable specific heat

SOURCE: AN BSSR. Vestsi. Seryya fizika-tekhnichnykh navuk, no. 4, 1966, 23-26

TOPIC TAGS: gas turbine , gas turbine fuel, thermodynamic cycle, specific heat, chemical reaction, turbine regenerator, heat exchange

ABSTRACT: In view of recent proposals to use chemically reacting gas systems as working media in gas turbines, the authors have continued their earlier research on regenerative turbine cycles (Vestsi AN BSSR, ser. fiz.-tekhn. navuk, no. 1, 1966), where they have shown that regeneration of heat can make a major contribution to the efficiency of the system. Calculations are presented for both uniflow and counter-flow systems, with account taken of the variation in the specific heat of the gas as a result of the chemical reactions that take place in it. The calculations are made on the basis of the heat balance equation for the heating and heated sides of the regenerating equipment, with allowance for the fact that in the case of variable specific heat the temperature differential within the system (relative to one of the terminal points of the regenerator) can occur not only on the ends of the interval

Card 1/2

ACC NR: AP6033066

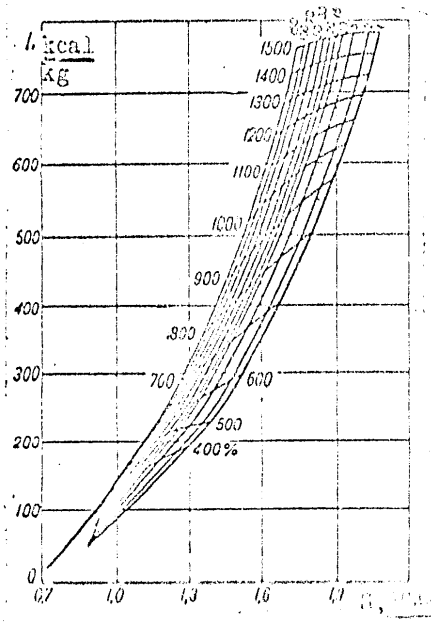


Fig. 1. I--S diagram of the dissociating system $N_2O_4 \rightleftarrows 2NO_2 \rightleftarrows 2NO + O_2$

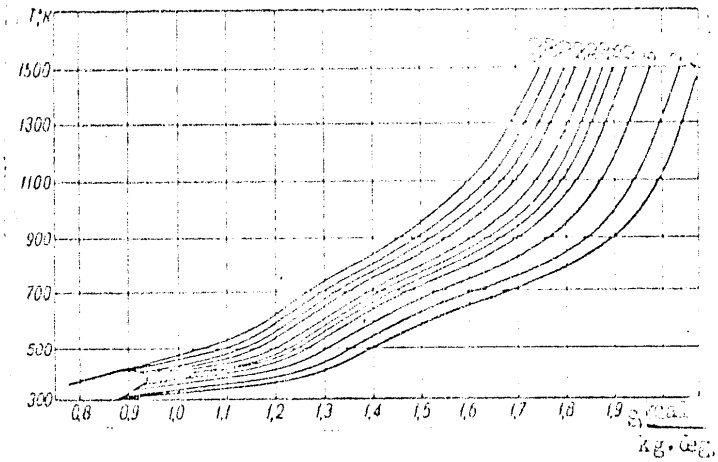


Fig. 2. T--S diagram of the dissociating system $N_2O_4 \rightleftarrows 2NO_2 \rightleftarrows 2NO + O_2$

SUB CODE: 20/ SUBM DATE: 23Mar66/ ORIG REF: 003/ OTH REF: 010

Card 2/2

ACC NR: AP6033000 SOURCE CODE: UR/0201/66/000/003/0020/0024

AUTHOR: Nesterenko, V. B.; Bazhin, N. A.; Bubnov, V. P.

ORG: IYaL AN BSSR

TITLE: Calculation of the thermodynamic properties of dissociating nitrogen tetroxide taking into account nonideality

SOURCE: AN BSSR. Vestsi. Seryya fizika-tekhnichnykh navuk, no. 3, 1966, 20-24

TOPIC TAGS: nitrogen tetroxide, nitrogen tetroxide dissociation, entropy, enthalpy, THERMODYNAMIC FUNCTION

ABSTRACT: This study was undertaken because of the lack of experimental data on the enthalpy of dissociating nitrogen tetroxide. A calculation of the entropy (S) and enthalpy (I) of dissociating N_2O_4

$$N_2O_4 \rightleftarrows 2NO_2 \rightleftarrows 2NO + O_2$$

was performed in the 300—1500K and 1—140 at range, taking into account deviation of the reaching N_2O_4 from ideal behavior. The calculation was carried out on the basis of general thermodynamic functions of the thermodynamic theory of empirical corrections and of generalized tables. The calculated S and I values were used for plotting I--S and T--S diagrams (see Fig. 1 and 2, respectively). Orig. art. has: 2 figures. [WA-77]

Card 1/2

ACC NR: AP6033071

Table 1. (Cont.)

650	17,7	21,6	25,6	29,8	34,1	38,5	42,9	47,6
660	17,4	21,2	25,2	29,2	33,4	37,7	42,1	46,7
670	17,1	20,8	24,7	28,7	32,8	37,0	41,3	45,7
680	16,8	20,4	24,2	28,1	32,2	36,3	40,6	44,8
690	16,5	20,1	23,8	27,7	31,6	35,6	39,8	44,0
700	16,3	19,8	23,4	27,2	31,0	35,0	39,1	43,2
710	16,0	19,5	23,0	26,7	30,5	34,4	38,4	42,5
720	15,8	19,1	22,6	26,2	30,0	33,9	37,7	41,7

with those obtained by W. G. Schlinger and B. H. Sage (in the range of temperatures and pressures studied by these authors). Orig. art. has: 1 table.

SUB CODE: 07/ SUBM DATE: 09Mar66/ ORIG REF: 006/ ORIG REF: 004

Card 4/4

ACC NR: AP6033071

Table 1. (Cont.)

660	2,368	2,331	2,289	2,251	2,213	2,179	2,148	2,114
670	2,372	2,336	2,298	2,259	2,223	2,186	2,156	2,125
680	2,375	2,341	2,304	2,268	2,233	2,198	2,164	2,135
690	2,378	2,346	2,311	2,272	2,243	2,206	2,172	2,144
700	2,381	2,351	2,318	2,281	2,250	2,213	2,181	2,152
710	2,383	2,357	2,324	2,290	2,257	2,220	2,189	2,160
720	2,386	2,362	2,330	2,298	2,264	2,226	2,197	2,168
				T				
420	40,0	51,3	64,4	79,9	97,8	119,6	144,7	178,8
430	37,0	46,6	57,5	70,3	85,4	102,7	121,3	145,6
440	34,2	43,0	52,9	64,0	76,6	90,8	106,0	125,5
450	32,1	40,3	49,2	59,0	69,8	81,7	95,1	110,5
460	30,4	37,8	46,0	54,8	64,5	75,0	86,4	99,4
470	28,8	35,7	43,3	51,3	60,0	69,5	79,8	91,0
480	27,5	34,0	41,0	48,4	56,4	64,8	73,7	83,3
490	26,4	32,5	39,0	45,9	53,3	61,0	69,3	78,2
500	25,4	31,2	37,4	44,0	50,9	58,0	65,8	74,0
510	24,6	30,2	36,1	42,2	48,7	55,5	62,8	70,4
520	23,8	29,2	34,9	40,9	47,1	53,6	60,5	67,6
530	23,2	28,3	33,8	39,6	45,5	51,7	58,3	65,1
540	22,5	27,6	32,8	38,4	44,1	50,1	56,5	62,9
550	21,9	26,8	31,9	37,3	42,9	48,7	54,8	61,0
560	21,4	26,0	31,1	36,3	41,7	47,4	53,2	59,2
570	20,9	25,4	30,3	35,4	40,7	46,1	51,8	57,6
580	20,5	24,8	29,5	34,5	39,6	45,0	50,4	56,1
590	19,9	24,3	28,9	33,8	38,7	43,9	49,1	54,6
600	19,5	23,8	28,2	33,0	37,8	42,8	47,9	53,3
610	19,1	23,3	27,6	32,3	37,0	41,9	46,8	52,0
620	18,7	22,8	27,1	31,7	36,3	41,0	45,8	50,8
630	18,3	22,4	26,6	31,0	35,5	40,1	44,7	49,5
640	18,0	22,0	26,1	30,5	34,8	39,2	43,8	48,5

Card 3/4

ACC NR: AP6033071

Table 1. Dependence of $Z_{eff} = P/\gamma RT$ and of the specific weight (γ) of dissociating nitrogen tetroxide on temperature and pressure

T, °K	P, kg/cm²							
	25	30	35	40	45	50	55	60
	Z_{eff}							
420	1,615	1,510	1,404	1,293	1,189	1,080	0,982	0,867
430	1,706	1,624	1,535	1,435	1,330	1,228	1,144	1,040
440	1,803	1,721	1,632	1,540	1,448	1,358	1,280	1,179
450	1,879	1,796	1,717	1,636	1,555	1,475	1,395	1,309
460	1,941	1,872	1,796	1,723	1,647	1,572	1,501	1,424
470	2,002	1,942	1,867	1,799	1,730	1,662	1,592	1,522
480	2,056	1,993	1,928	1,868	1,803	1,743	1,686	1,628
490	2,098	2,043	1,985	1,928	1,870	1,816	1,758	1,698
500	2,135	2,084	2,029	1,974	1,918	1,871	1,814	1,759
510	2,166	2,117	2,062	2,016	1,966	1,917	1,864	1,812
520	2,187	2,142	2,093	2,042	2,993	1,946	1,898	1,851
530	2,211	2,170	2,120	2,069	2,023	1,979	1,930	1,888
540	2,230	2,187	2,142	2,094	2,050	2,004	1,957	1,918
550	2,248	2,211	2,167	2,117	2,071	2,025	1,981	1,939
560	2,268	2,233	2,182	2,136	2,091	2,045	2,001	1,963
570	2,279	2,244	2,202	2,151	2,106	2,066	2,021	1,983
580	2,293	2,259	2,217	2,166	2,124	2,079	2,042	2,001
590	2,307	2,269	2,230	2,179	2,139	2,096	2,061	2,020
600	2,318	2,279	2,244	2,192	2,152	2,111	2,075	2,036
610	2,330	2,287	2,253	2,201	2,157	2,124	2,090	2,054
620	2,338	2,298	2,259	2,210	2,168	2,136	2,101	2,067
630	2,349	2,309	2,267	2,219	2,183	2,149	2,119	2,086
640	2,354	2,317	2,274	2,227	2,194	2,161	2,130	2,096
650	2,361	2,326	2,282	2,244	2,204	2,167	2,140	2,106

Card 2/4

ACC NR: AP6033071 SOURCE CODE: UR/0201/66/000/003/0129/0134

AUTHOR: Bubnov, V. P.; Gusarov, V. N.; Kulashov, G. G.; Nesterenko, V. B.; Timofeyev, B. D.

ORG: IYaE AN BSSR

TITLE: Experimental study of P-V-T properties of dissociating nitrogen tetroxide

SOURCE: AN BSSR. Vestsi. Seryya fizika-tekhnichnykh navuk, no. 3, 1966, 129-134

TOPIC TAGS: nitrogen tetroxide, dissociation, P V T property, specific weight

ABSTRACT: P-V-T properties of dissociating nitrogen tetroxide have been determined at 420—720C and 25—60 kg/cm^2. The study was undertaken because of the absence of literature data on these properties at higher temperatures and pressures. The experimental and calculation procedures are described in the source. The results of the study are given in Table 1. These results are in good agreement (difference ± 2%) with those obtained by [illegible]

Card 1/4

ACC NR: AP6033067

thermophysical properties. It is suggested that the final laws governing the heat transfer of dissociating gas be determined by means of further experimentation. Orig. art. has: 1 figure, 9 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 20Sep65/ ORIG REF: 003/ OTH REF: 001

Card 2/2

ACC NR: AP6033067 SOURCE CODE: UR/0201/66/000/003/0028/0032

AUTHOR: Bakalin, Yu. I.; Nesterenko, V. B.; Kremeshnyy, A. I.

ORG: IYaE AN BSSR

TITLE: Stand for the investigation of heat exchange of a dissociating gas at low pressure

SOURCE: AN BSSR. Vestsi. Seryya fizika-tekhnichnykh navuk, no. 3, 1966, 28-32

TOPIC TAGS: heat exchange, gas dissociation, thermodynamic calculation

ABSTRACT: To estimate the degree to which heat exchange in chemically reacting gases is modified by the chemical reactions and to measure this heat exchange, the authors have developed a test stand for measuring heat transfer from a dissociating gas. The heat-transfer liquid was fed to an evaporator, preheater, experimental heat-transfer section, a refrigerator for cooling the spent gas and a condenser. The main, measuring, and auxiliary equipment is described and the theory underlying the measurements is briefly developed. The measurements, made at temperatures up to 150C, consisted of a determination of the local heat transfer coefficient at heat loads from 8×10^3 kcal/m^{2}hr to 1.5×10^4 kcal/m^{2}hr, for Reynold's numbers from 7×10^3 to 10^4. The heat-transfer coefficient was found to be higher than expected from the theory, thus confirming the assumption that the chemical reactions increase the amount of heat. Preliminary experimental data have confirmed the possibility of using the relations previously obtained by other authors for heat-transfer liquids with greatly varying

Card 1/2

L 04652-67
ACC NR: AP6024003

formed. The authors thank Academician AN BSSR A. K. Krasin for interest in the work. Orig. art. has: 4 formulas.

SUB CODE: 07, 18/ SUBM DATE: 29Sep65/ ORIG REF: 004/ OTH REF: 001

Card 2/2

L 04652-67 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6024003 SOURCE CODE: UR/0201/66/000/002/0039/0041

AUTHOR: Nesterenko, V. B.; Nichipor, G. V.

ORG: Institute of Nuclear Power, AN BSSR (Institut yadernoy energetiki AN BSSR)

TITLE: Radiation endurance of nitrogen oxides

SOURCE: AN BSSR. Vestsi. Seryya fizika-tekhnichnykh navuk, no. 2, 1966, 39-41

TOPIC TAGS: nitrogen oxide, irradiated gas, gamma irradiation, neutron irradiation, dissociated gas, gamma ray absorption, chemical decomposition

ABSTRACT: In connection with the construction at the Institute of Nuclear Power AN BSSR of an experimental setup for the study of the decomposition of N_2O_4 flowing through an IRT-2000 reactor at high temperatures and pressure $p > 1$ atm, the authors carried out a preliminary investigation of N_2O_4, which decomposes irreversibly under γ-n irradiation. The radiative decomposition of the nitrogen oxides was investigated for different types of radiation by various investigators. Since N_2O_4 turns at high temperatures and pressures above 1 atm into a mixture of NO_2, NO, and O_2, the authors calculated the total energy yield of the decomposition of the N_2O_4 under the assumption that each component decomposes under the influence of the radiation independently of the other. It was further assumed that the γ-quantum absorption curve coincides with the curve describing the distribution of the γ-quantum sources. A formula for the total yield is presented in terms of the published yields of the individual components. The accuracy of the results will be estimated after the experiment is per-

Card 1/2

L 29717-66

ACC NR: AP6010200

values. Using reacting gases as the working body, an increase in the initial temperature and pressure parameters results in an increase in the efficiency coefficient; this cannot be said in regard to cycles employing steam as the working body. The article concludes that the use of such dissociating gases shows great industrial promise and is worthy of further theoretical and experimental investigation. "The authors of the article express their thanks to Academician A. K. Krasin of the AN BSSR for proposing the subject of the investigation and for his interest in the work." Orig. art. has: 5 figures.

SUB CODE: 20,07 / SUBM DATE: 29Sep65/ ORIG REF: 003/ OTH REF: 001

Card 2/2 CC

L 29717-66 EWT(1)/EWT(m)/ETC(f)/T RM/WW/JW/WE

ACC NR: AP6010200 SOURCE CODE: UR/0201/66/000/001/0015/0018

AUTHOR: Bubnov, V. P.; Matyunin, A. M.; Nesterenko, V. B.

ORG: Nuclear Power Institute AN BSSR (Institut yadernoy energetiki AN BSSR)

TITLE: Thermodynamic analysis of cycles using chemically dissociating gases as a working body

SOURCE: AN BSSR. Vestsi. Seryya fizika-tekhnichnykh navuk, no. 1, 1966, 15-18

TOPIC TAGS: thermodynamic analysis, chemical reaction, gas turbine, nitrogen oxide

ABSTRACT: The article gives a thermodynamic analysis of a cycle with compression in the liquid phase (gas-liquid cycle) using a chemically reacting gas as the working body in a turbine. The investigation was based on nitrogen tetroxide since more data are available on its properties. The article gives a schematic diagram of the turbine cycle. The calculations show that use of chemically dissociating gases as working bodies in the range of temperatures and pressures considered ($T = 823\text{-}1023^{\circ}K$, $P = 40\text{-}90$ atm) makes it possible to achieve efficiencies for the cycle which range from 32 to 49% of the absolute

Card 1/2

L 29718-66
ACC NR: AP6010199

proposing the problem and for his interest in the work." Orig. art. has: 35 formulas and 3 tables.

SUB CODE: 20,07/ SUBM DATE: 29Sep65/ ORIG REF: 008/ OTH REF: 010

Card 2/2

L 29718-66 EWT(l)/EWT(m)/ETC(f) RM/WW/JW/WE

ACC NR: AP6010199 SOURCE CODE: UR/0201/66/000/001/0005/0014

AUTHOR: Nesterenko, V. B.; Bubnov, V. P. 14 B

ORG: Nuclear Power Institute AN BSSR (Institut yadernoy energetiki AN BSSR)

TITLE: Calculation of the thermodynamic functions of chemically reacting gases

SOURCE: AN BSSR. Vestsi. Seryya fizika-tekhnichnykh navuk, no. 1, 1966, 5-14

TOPIC TAGS: thermodynamic analysis, chemical reaction, nitrogen oxide, enthalpy, entropy, gas dissociation

ABSTRACT: It is claimed that the use of a dissociating gas in a turbine has a favorable effect by increasing the rate of heat removal, since heating of the gas is accompanied by greater absorption of heat due to dissociation. The present article presents a thermodynamic analysis based on nitrogen tetroxide, which belongs to the class of dissociating gases. A table gives values of the "effective enthalpy and entropy as a function of temperature and pressure. A second table shows results of a comparative calculation of the enthalpy and the entropy. "The authors express their thanks to Academician A. K. Krasin of the AN BSSR for

Card 1/2

L 01462-66

ACCESSION NR: AP5014736

reactor, as well as for the study of dynamic characteristics of the regenerator, cooler, and other heat-exchange equipment in atomic power installations. Orig. art. has: 5 figures and 9 formulas.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: NP, DP

NR REF SOV: 004 OTHER: 003

Card 3/3

ACCESSION NR: AP5014736

ing conditions of atomic power installations because they can be readily integrated in the control system and they do not require laborious and expensive programming. The transformation is based on an approximation in which the rated heat-transfer scheme is represented by an integral values of the fuel-element and gas temperature averaged over the cross section. The various approximations and assumptions are discussed and the integral quantities, obtained in the form of a series, are written out for one and two terms in the expansion. The simulation of the nonstationary conditions of a nitrogen-cooled 50-MW reactor by means of a type MNB-1 computer is briefly described and the resultant plots of the outlet gas temperature and of the neutron flux, following changes in temperature, gas flow, and reactivity, are presented. The results agreed within 3--4% with calculations by a finite-difference method, and made it possible to get along with fewer differential equations (5 vs. 8). The method is recommended for the study of the characteristics of the warm-up, starting, power-change, and emergency shutdown of the

L 01462-66 EWT(m)/EPF(c)/EPF(n)-2/EWG(m) WW

ACCESSION NR: AP5014736 UR/0201/65/000/001/0038/0043

AUTHORS: Nesterenko, V. B.; Shadskiy, V. M.

TITLE: Simulation of nonstationary thermal processes in gas-cooled power reactors with analog computers

SOURCE: AN BSSR. Izvestiya. Seriya fiziko-tekhnicheskikh nauk, no. 1, 1965, 38-43

TOPIC TAGS: nuclear power reactor, gas cooled reactor, reactor control, control simulator, analog computer

ABSTRACT: The described simulation method is based on transformation of the partial differential equations in three variables, which describe the processes in the reactor, into ordinary nonlinear differential equations which can be handled by standard analog computers. The latter are preferred for the development of automatic control systems or for the investigation of the emergency and start-

Card 1/3

NESTERENKO, V. B.

"Stimulation methods of transient thermal processes in [illegible] on analogue computers."

report presented at the 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva, 31 Aug-9 Sep 64.

NESTERENKO, V. B.; SHADSKIY, V. M.

"The modelling method on transient thermal processes in [illegible] reactors on the analogue computers."

report submitted for 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva, 31 Aug-9 Sep 64.

NESTERENKO, V. B.

"Analog computation method for unsteady heat transfer in regenerators and condensers of closed-cycle gas-turbine installations."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Inst of Heat & Mass Transfer, AS BSSR.

APPROVED FOR RELEASE: 12/02/11: CIA-RDP86-00513R001136700041-6

NESTERENKO, V.A.; KHRABROV, N.I.; PAVLENKO, I.Ya.; KONONENKO, V.K.

Driving and supporting haulage workings in mines developing the Fominskoye layer. Ugol' Ukr. 7 no.6:16-18 Je '63. (MIRA 16:8)

1. Khar'kovskiy institut gornogo mashinostroyeniya, avtomatiki i vychislitel'noy tekhniki (for Nesterenko, Khrabrov). 2. Shakhterskiy trest ugol'nykh predpriyatiy kombinata Rostovugol' Ministerstva ugol'noy promyshlennosti SSSR (for Pavlenko). 3. TsNIIGoroshsheniye (for Kononenko).

Preliminary Drying of Sands (Cont.)

showing the relationships of sand removal, stoppage, and efficiency of a filter to the filter's structural coefficients with different thicknesses of filter material and to different structures of the perforated casing. It is shown that the selection of the structural coefficient of a filter and of the thickness of filter material must be made in each separate situation by considering the complex conditions. It should be remembered that with the values of structural coefficient most commonly used, from 5 to 15, the thickness of the layer of filter material should be from 30 to 50 to 70 mm. A sharp increase in the structural coefficient may produce a considerable removal of sand; a decrease may lead to a lowered intensity of the process. The author thinks it necessary to conduct experimental studies for perfecting the calculation for filters of water-lowering drill holes.

Card 2/2

L. S. L.

15-57-3-3968

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3, p 207 (USSR)

AUTHOR: Nesterenko, V. A.

TITLE: Preliminary Drying of Sands, Overlying and Underlying Coal Beds, by Deep Water-Lowering (K voprosu predvaritel'nogo osusheniya nadugol'nykh i podugol'nykh peskov sposobom glubokogo vodoponizheniya)

PERIODICAL: Nauch. tr. Khar'kovsk. gorn. in-t , 1955, Nr 2, pp 41-46

ABSTRACT: The author examines methods of drying extremely wet coal deposits in a complex hydrogeological environment by pumping water from water-lowering bore holes drilled from the surface through to water-bearing rocks. He studies the case of preliminary drying of deposits in fine-grained rocks, the most difficult to drain, and finds that seepage into water-lowering drill holes may be of considerable value. He describes the construction of various filters and furnishes a number of graphs

Card 1/2

NESTERENKO, Vladimir Aleksandrovich; CHUPRUNOV, G.D., nauchnyy redaktor; KONTSEVAYA, E.M., redaktor; KRYNOCHKINA, K.V., tekhnicheskiy redaktor.

[Progressive drift mining methods.] Peredovye metody raboty pri prokhodke shtrekov. Moskva, Vsesoiuznoe uchebno-pedagog. izd-vo Trudrezervizdat, 1954. 29 p. (MLRA 8:3)
(Donets Basin--Coal mines and mining)

ILLEGIBLE

USSR/Cultivated Plants - Potatoes. Vegetables. Melons. etc. M.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15595

Author : V. Nosterenko

Inst : -

Title : The Effect of the Feeding Bed on Seed Quality. (Vliyaniye ploshchadi pitaniya na semennyye kachestva).

Orig Pub : Kartofel', 1957, No 2, 41-43.

Abstract : At the Stalin Kolkhoz in Stavropol' when the medium late Cornwallis variety potato was raised only in summer plantings, it yielded an increase of up to 62 centners per hectare on an 11 year average. The medium and early varieties (RP-65, Early Pink) yielded an even more significant boost (up to 87 centners per ha.). In dry years all potato varieties yield a higher output when planted in the summer. The largest yields are given by dense row sowing (70 x 30 and 70 x 25 centimeters). The lowered harvest with square cluster

Card 1/2

S 0V/130-59-1-4/21

Utilization of Slag Gramulation Water for Blast-furnace Cooling

eliminated tuyere and slag-notch cooler failures. The practice has continued for six years. The author explains the observed increase in permanent hardness of water during granulation by solution of calcium and magnesium sulphates.

ASSOCIATION: Donetskiy industrial'nyy institut (Donets Industrial Institute)

Card 2/2

SOV/130-59-1-4/21

AUTHOR: Nesterenko, T.T., Candidate of Technical Sciences

TITLE: Utilization of Slag Granulation Water for Blast-Furnace Cooling (Ispol'zovaniye vody ot granulyatsii shlaka dlya okhlazhdeniya domennoy pechi)

PERIODICAL: Metallurg, 1959, Nr 1, pp 9-10 (USSR)

ABSTRACT: The life of blast-furnace coolers depends largely on cooling-water quality. At works in the Donbass the water is mineral-saturated. At the Almaznyanskiy metallurgical works the temporary hardness rises to a value which leads to difficulties in cooler maintenance. The author carried out tests in which water from a blast-furnace slag granulation plant was added instead of river or reservoir water to the circulating water. At first the filters tended to become clogged with pieces of old carbonate scale loosened from the pipes by the soft water. The use of this water has obviated the need for periodic flushing of coolers with hydrochloric acid and has almost

Card 1/2

NESTERENKO, T.I.

Study of the incidence of disease in machinery operators and livestock raisers of the village of Pereyaslavskaya. Nauch. trudy Kub. gos. med. inst. 19:130-134 '62.

Provision of hospital aid for the rural population of Krasnodar territory. Ibid.:142-151 (MIRA 17:8)

1. Iz kafedry organizatsii zdravookhraneniya i sotsial'noy [illegible] (zaveduyushchiy - dotsent V.A. Kerimov) Kubanskogo gosudarstvennogo meditsinskogo instituta.

NESTEROV, V.A., kand.meditsinskikh nauk; D'YACHENKO, I.Ya.;
NESTEREN"O, T.I. (Ust'-Labinsk)

On allowance during temporary disability, pensions to collective farm workers, and the rural district hospital. Sov. zdrav. 19 no. 8:52-54 '60. (MIRA 13:10)

1. Iz kafedry organizatsii zdravookhraneniya (zav. V.A. Nesterov) Kubanskogo meditsinskogo instituta i Mar'yanskoy uchastkovoy bol'nitsy (glavnyy vrach I.Ya. D'yachenko).
(AGRICULTURAL LABORERS--PENSIONS) (INSURANCE, HEALTH)

IOFA, Z.A.; NESTERENKO, T.A.

"Effect of Anion Adsorption on the Action of Inhibitors of the Acid Corrosion of Iron and Cobalt."

Report presented at the 14th meeting CITCE, Intl. Comm. of Electrochemical Thermodynamics and Kinetics, Moscow, 19-25 Aug 63.

Moscow State University, U.S.S.R.

APPROVED FOR RELEASE: 12/02/11: CIA-RDP86-00513R001136700041-6

NESTERENKO, S. T., Candidate of Agric Sci (diss) -- "Black-spotted cattle of Ryazan Oblast, their agricultural-biological properties, and ways of improving them". Moscow, 1958. (All-Union Sci Res Inst of Animal Husbandry, Dept of Cattle Raising), 150 copies (KL, No 21, 1959, 117)

NESTERENKO, Semen Leont'yevich; DMITRIYEV, A.V., inzhener, retsenzent; RIKENBERG, D.B., red.

[Guide to safety measures in laying, repairing, and lining steel-smelting furnaces] Pamiatka po tekhnike bezopasnosti dlia kamenshchikov po kladke, remontu i obmurovke staleplavil'nykh pechei. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1959. 101 p.

(MIRA 14:5)

(Smelting furnaces) (Metallurgical plants--Safety measures)

NESTERENKO, Semen Leont'yevich; GLAZKOV, P.G., inzh., retsenzent; SHEVTOK, V.K., inzh., red.; LYKHOTA, M.A., tekhn.red.

[Instructions on safety techniques for foundrymen pouring metal into molds] Pamiatka po tekhnike bezopasnosti dlia zalivshchikov form metallom. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1956. 33 p. (MIRA 12:9)
(Founding--Safety measures)

NESTERENKO, S.

Improve the organization of interurban haulage. Avt. transp. 43 no.2:13-14 F '65. (MIRA 18:2)

1. Predsedatel' Komiteta partiyno-gosudarstvennogo kontrolya Novopromyshlennogo rayona g. Kalinina.

NESTERENKO, S.

Fertilizers and Manures

Using peat-manure composts. Kolkh. proizv. 12, No. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Unclassified.

ACC NR: AP6026686 SOURCE CODE: UR/0181/66/008/008/2370/2373

AUTHOR: Nesterenko, P. S.; Barinov, L. P.

ORG: Rostov on the Don State University (Rostovskiy-na-Donu gosudarstvennyy universitet)

TITLE: Isopotential curves of the depolarization of CdS monocrystals

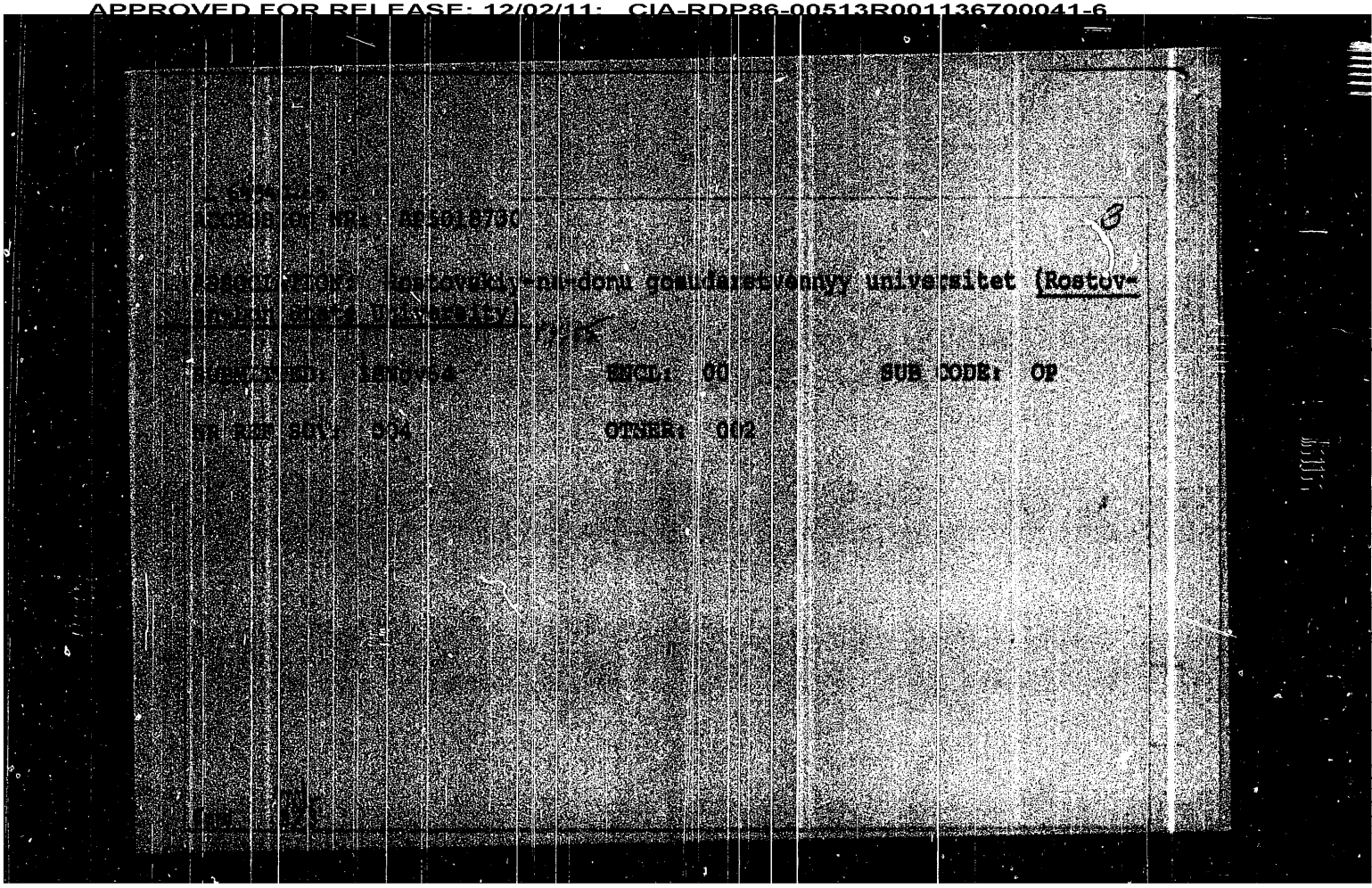
SOURCE: Fizika tverdogo tela, v. 8, no. 8, 1966, 2370-2373

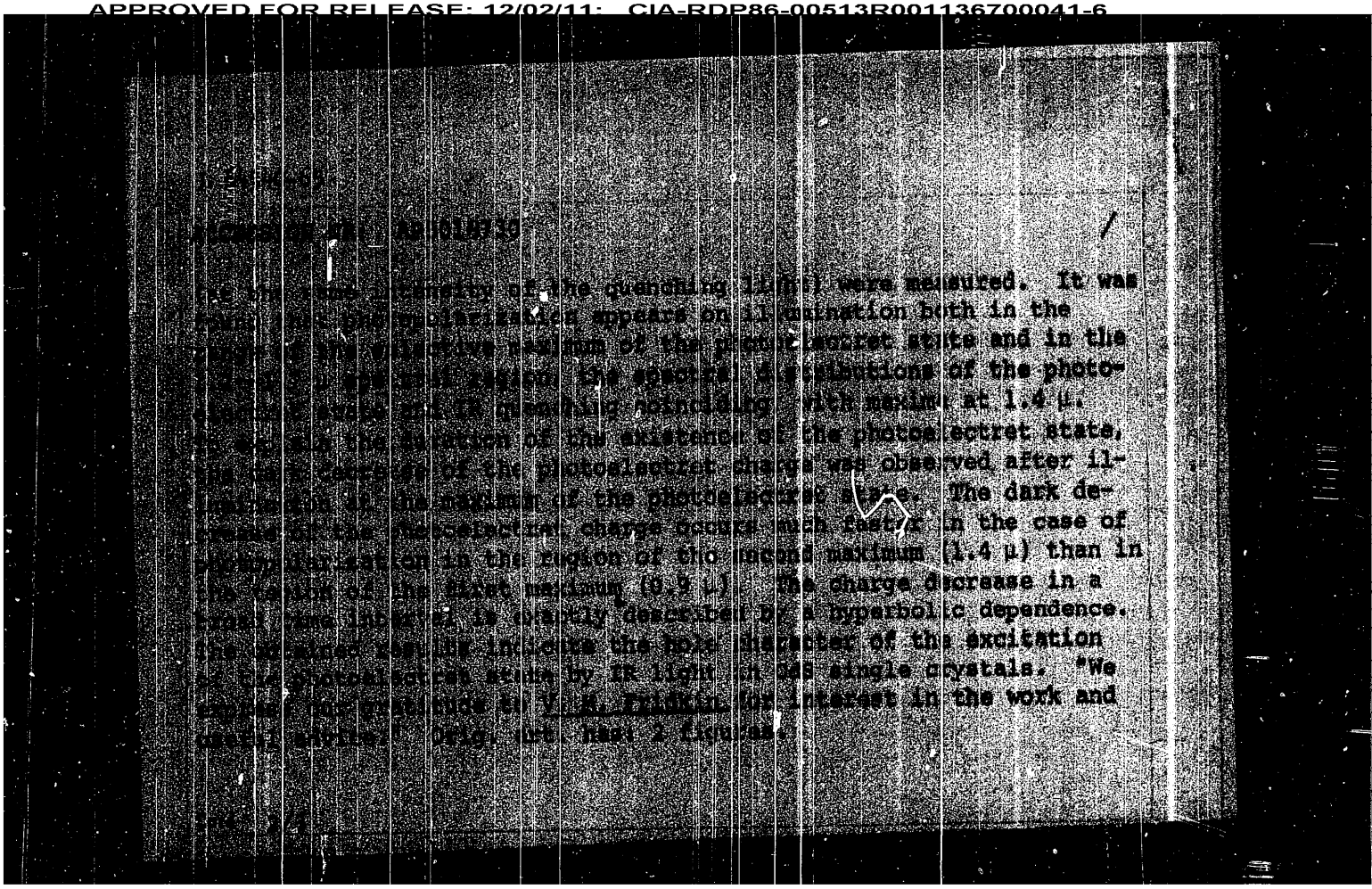
TOPIC TAGS: photoelectret, electrophotography, electric polarization

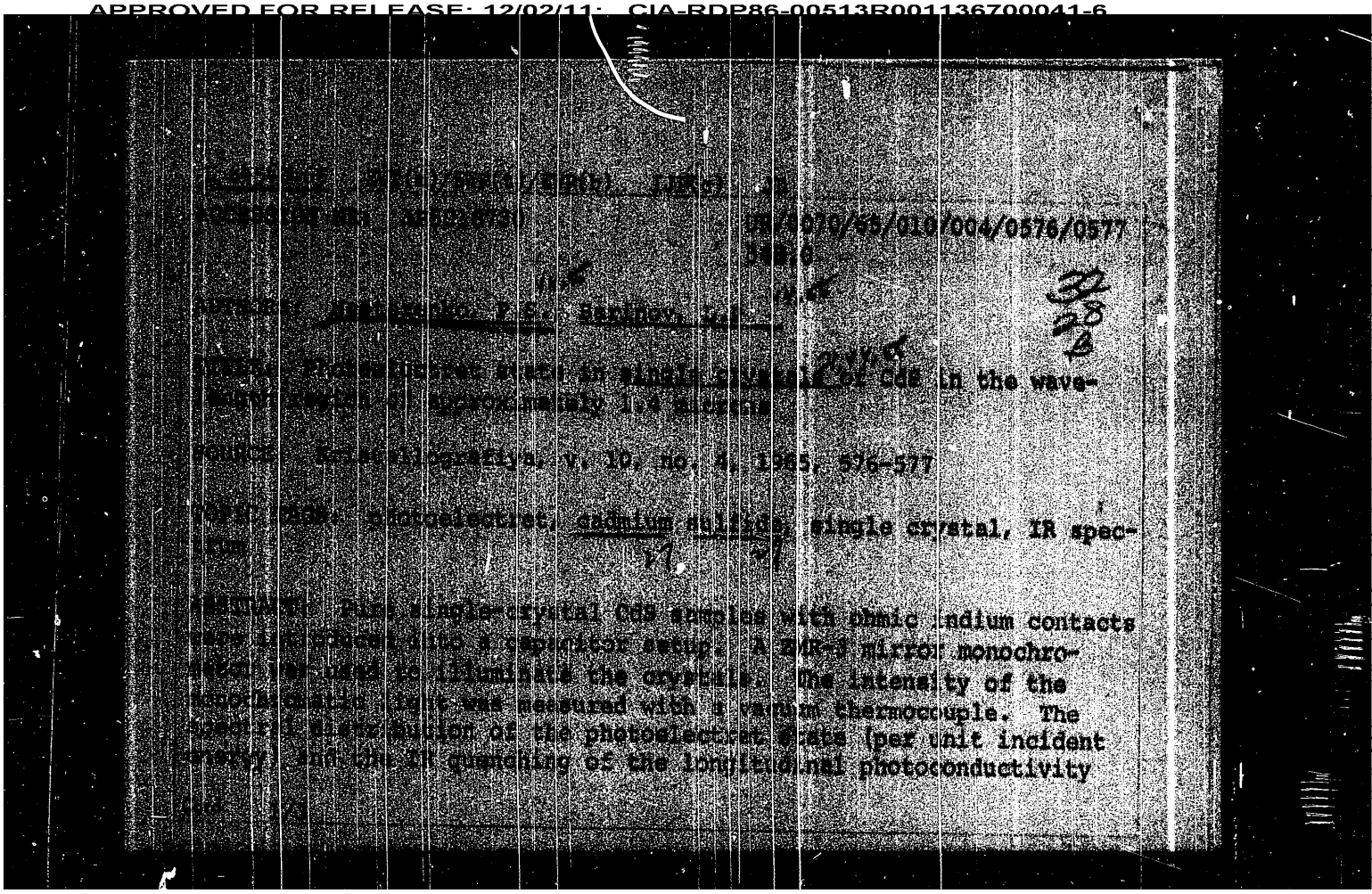
ABSTRACT: The study of isopotential curves of the photoelectret state is important for electrophotography. Analysis of these curves makes it possible to estimate certain parameters of local levels characterizing the kinetics of polarization and depolarization of several photoelectrets. Since there is a unique correspondence between the isopotentials and the luxampere characteristic of the crystal, the latter curves can be studied in terms of the former in those regions of the spectrum where the photoelectret state is too weak for direct measurement of photocurrents. Investigations were carried out on pure CdS crystals 4 × 3 × 0.2 mm. Results show that it is necessary to take the isopotential depolarization curves in the absence of through conductivity. The shape of the isopotentials so obtained and the shape of the luxampere characteristics for the crystals are in good agreement with theory. Orig. art. has: 5 figures.

SUB CODE: 20/ SUBM DATE: 08Jan66/ ORIG REF: 012/ OTH REF: 001

Card 1/1







ACCESSION NR: AP4039671

quasi-static levels of the electron transitions are realized over a broad range of exposures. A link exists between the form of the isopacity and the lux ampere characteristics of the crystal, and for CdS, isopacity is the sole method of studying the lux ampere characteristics. The author thanks V. M. Fridkin for his interest in the work. Orig. art. has: 5 figures.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvenny*y universitet (Rostov-on-the-Don State University)

SUBMITTED: 14Jan64 ENCL: 00

SUB CODE: SS NO REF SOV: 013 OTHER: 002

Card 3/3

ACCESSION NR: AP4039671

gradiated by spectral photometer SF-4. The voltage (50-100V) and polarizing light of intensity I were applied simultaneously, and after time t the light and then the voltage were removed. The crystal with shorted electrodes was kept in darkness for 60 seconds and then depolarized by repeated illumination with light of the same λ and I. Decay of the discharge current, leaking during the photo-depolarization at the maximum photoconductivity ($\lambda = \lambda_0$), was exponential, $i = i_0 \exp-(\frac{t}{\tau})$ with the characteristic time τ comparable to the Maxwell relaxation time $\tau_M = \frac{\varepsilon}{4\pi\sigma}$. The charge of the photoelectret tended toward a plateau where it was independent of I of the activating light in the near infrared region. Both the electrophotographic isopacities (log of the exposure It versus log I) and the characteristic curve of ph.s. (i_M versus log It) proved the law of intersub-stitution for photoelectrons played a major role in the formation of ph.s. A plot of the log of the characteristic time for ph.s. formation (log $\tau_{ph.s.}$) versus log I was linear, thus $\tau_{ph.s.} = CI^{-\alpha}$ where $\alpha \leq 1$, and C is a fixation constant. The ph.s. formation is linked with photoactivation and hole motion. Theoretical studies and experimental data indicated that in the formation of the ph.s. the

Card 2/3

S/0181/64/006/006/1799/1803

ACCESSION NR: AP4039671

AUTHOR: Nesterenko, P. S.

TITLE: The kinetics of the formation of the photoelectret state in monocrystals of CdS

SOURCE: Fizika tverdogo tela, v. 6, no. 6, 1964, 1799-1803

TOPIC TAGS: photoelectret, cadmium sulfide, opacity, Maxwell equation, / UM 2 monochromator, SF 4 spectral photometer

ABSTRACT: The formation of the photoelectret state (ph.s.) in monocrystals of CdS at room temperature was studied, using light at the ph.s. spectral maximum ($\lambda_{m.ph.s.}$). A measurement condenser with transparent (conducting glass) and nontransparent (tin-coated brass) electrodes was inserted in the electrometer with Bart balance (lamp 1E1P, current measured to $5 \cdot 10^{-15}$ and input resistance 10^{11} ohm). This setup also permitted linear conductivity to be measured at its spectral maximum (λ_0 = 0.516-0.520). Regulation of monochromatic light (monochromator UM-2) was controlled with a neutral light filter accurately

Card 1/3

NESTERENKO, P.S.

Photoelectret state in CdS single crystals. Dokl. AN SSSR 153 no.5:1040-1043 D '63. (MIRA 17:1)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Predstavleno akademikom A.V. Shubnikovym.

Dark polarization of polycrystalline ...

the local adhesion levels. The electronic charge is uniformly distributed throughout the volume of the sample and is not influenced by short circuiting the electrodes. The long duration of this volume charge is explained by slow ionization of weakly bound ions near the structural defects. This agrees qualitatively with the trends of P(E) and P(t). The course of the $\sigma(T)$ curves shows that with weak fields only levels of shallow traps are occupied by electrons deeper traps becoming occupied only at higher field strengths. The low-temperature slope of the $\ln \sigma = f(1/T)$ curves is "smeared out" owing to participation by traps of different depths; hence fields of more than 200 v/cm should not be applied. There are 5 figures.

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TITLE: Dark polarization of polycrystalline cadmium sulfide

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TEXT: Dark polarization was measured on disk-shaped samples 0.8-3 mm thick containing copper as an activator ($\approx 10^{-4}$ g/g CdS). The photoeffect peaks of the samples occurred at 760 mμ (high peak) and 550 mμ (lower peak). The samples were sealed hermetically in a casing impervious to light and introduced into an ultrathermostat in which, between 10 and 125°C (±0.02°C), the I(t) curves were measured with an accuracy up to 10^{-10} a. The field strengths applied were up to $4 \cdot 10^3$ v/cm. Also P(E) and $\ln \sigma = f(1/T)$ were measured. The latter show the course that is characteristic of impurity semiconductors. The inclinations (extrapolated) give activation energies of 0.6 ev for the region of impurity conductivity and 2.2 ev for that of the intrinsic conductivity. The measurement results indicate that the space charge is produced by electrons filling

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